REMARKS

Status of Claims

[1] Claims 1, 5, 8, 10-22, 24-25, 27, 29, 31 and 33 are currently pending in the application. The claims have not been amended herein.

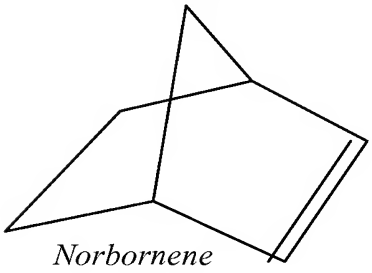
Rejections

Under 35 U.S.C. 102(e)

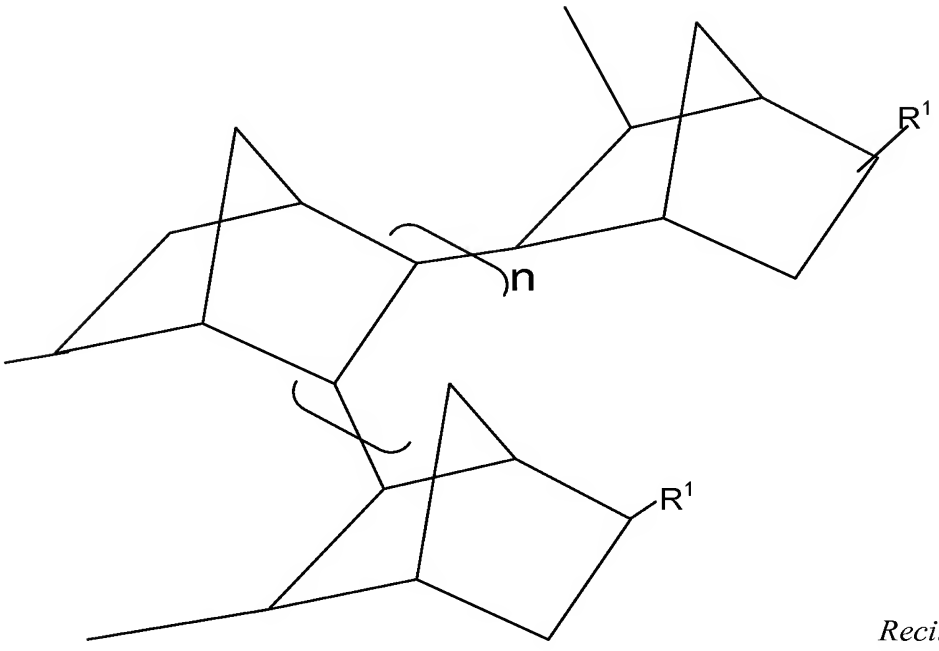
Li et al.

[2] In ¶4 of the Office Action, the Examiner rejected claims 1, 8, 10, 12-13 and 22 under this provision as anticipated by U.S. Pat. Pub. No. 2004/0084774 to Li et al. ["Li"].

[3] The recited polynorbornenes are produced by an addition polymerization mechanism of the norbornene double bond, which is schematically illustrated here:



Norbornene

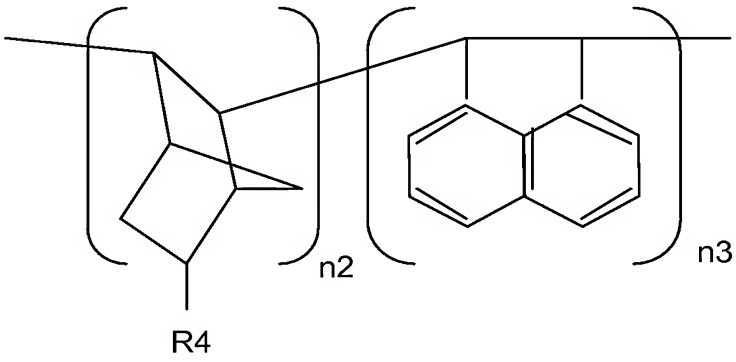


Recited Polynorbornene

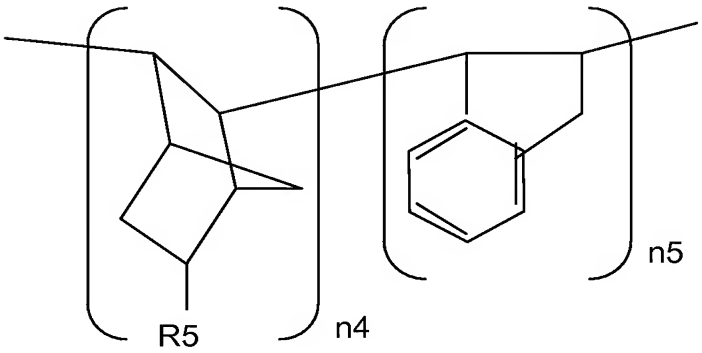
[4] Li does not disclose the recited composition. In ¶32, Li discloses its gas layer formation material, which includes copolymers of acenaphthylene and norbornene, polynorbornene derivatives, and blends of polynorbornene and polyacenaphthylene. Copolymers of acenaphthylene and norbornene by definition contain acenaphthylene units in the backbone. Li ¶35 defines the norbornene comonomer as 5-vinyl-2-norbornene and discloses at ¶36 that the comonomer amount preferably ranges from 5 to about 50 mole % of the copolymer. Thus, the remaining 50 mole percent of the copolymer or greater is made up of the acenaphthylene repeat unit.

[5] The present compositions contain no acenaphthylene units and are thus different compositions of matter. Although the present claims recite the word comprising, claim scope is determined by reference to the specification, which does not disclose that the present composition could comprise acenaphthylene. Hence, the scope of the present claims **cannot** include acenaphthylene. Consequently, Li cannot read on the present claims.

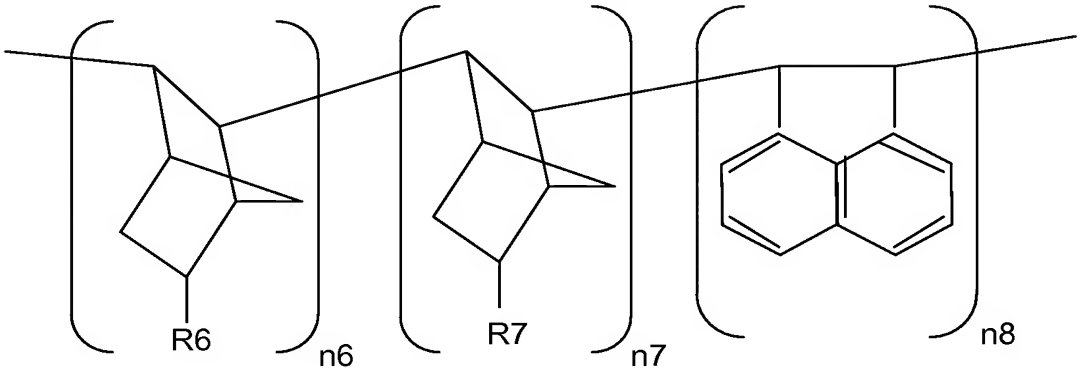
[6] Li also discloses certain polynorbornene derivatives from ¶40. The Li derivatives include polynorbornene-co-acenaphthylenes of the formula:



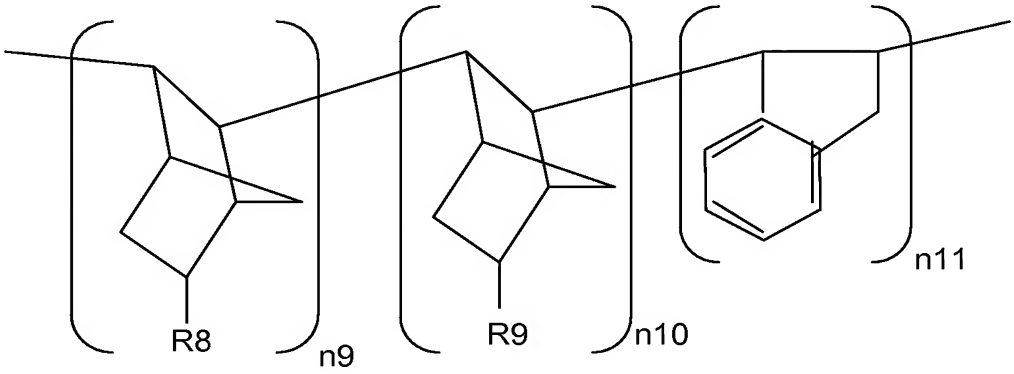
They also include polynorbornene-co-indenes of the formula (Li ¶42):



Li ¶44 further defines the polynorbornene derivatives to include copolynorbornene-co-acenaphthylenes of the formula:



and copolynorbornene-co-indene of the formula (Li ¶46)



[7] All of these disclosed polynorbornene derivatives contain at least some of the acenaphthylene or indene structure. That is, Li ¶¶41, 43, 45, 47 expressly disclose that n3, n5, n8 and n11 do not equal zero. Inasmuch as the present compositions do not contain acenaphthylene or indene units because there is no support for such a composition in the specification, Li does not read on the present claims.

[8] Li states in ¶32 that polymers useful in its invention include blends of polynorbornene and polyacenaphthylene. However, there is no further disclosure regarding such blends. Nonetheless, the present invention does not recite blends of polynorbornene.

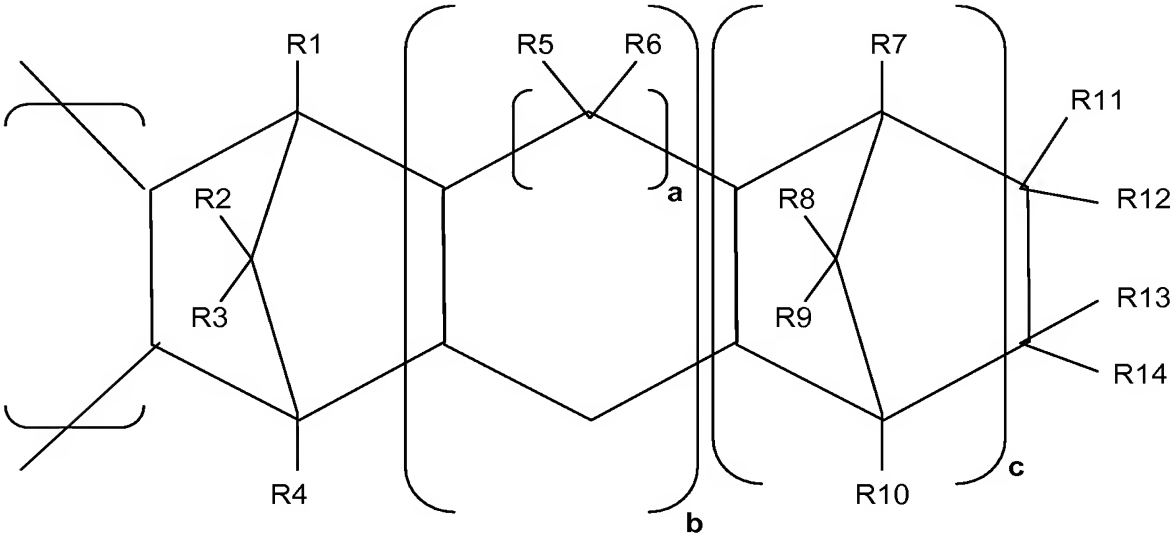
[9] Inasmuch as Li does not disclose the recited compositions, Applicants request the withdrawal of this rejection.

Under 35 U.S.C. 102(b) or in the alternative under 35 U.S.C. 103(a)

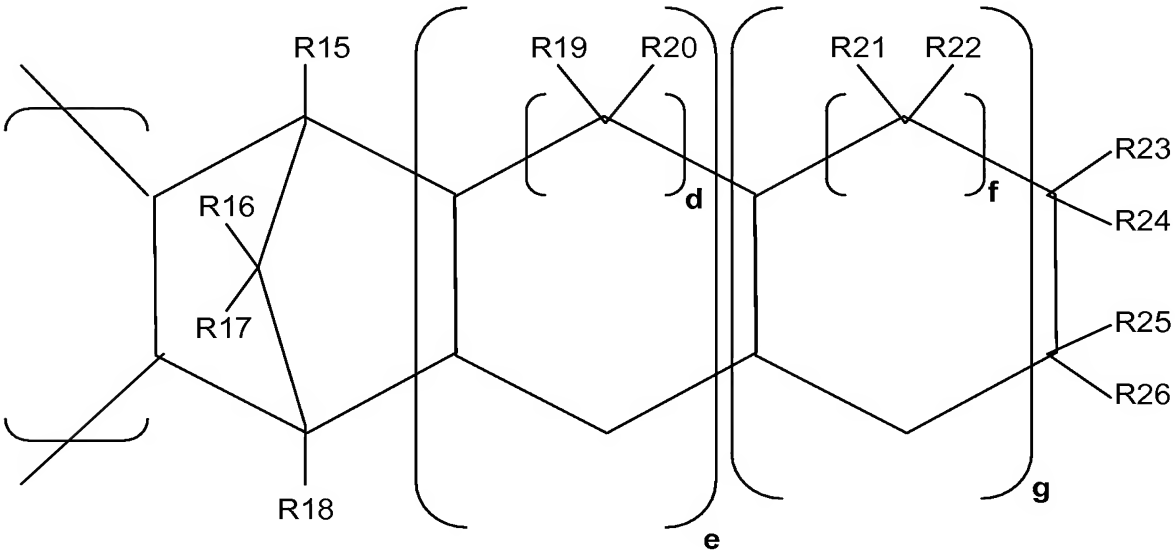
JP10-251343

[10] In ¶5 of the Office Action, the Examiner rejected claims 1,5, 8, 10 and 22 as anticipated or in the alternative obviated under the above provisions relative to Jap. Pat. App. No. JP 10-251343 ["JP '343"].

[11] JP '343 discloses polynorbornene copolymers of repeat unit A and repeat unit B where A and B are defined below



Repeat unit A



Repeat unit B

[12] The preferred co-monomer range of A and B above is 100:0 to 30:70 respectively (JP '343,¶4) This means that the repeat unit A has to be present in all disclosed compositions in JP '343. With respect to repeat unit A, JP '343 (pg. 4, ¶25) discloses that **a** can be 0,1,or 2 and **b** can be 0,1, or 2 and **c** is 1 or 2. This translates into the fact that the repeat unit A contains at a minimum two fused bi-cyclic structures.

[13] Thus, in summary, the JP '343 composition contains two repeat units: repeat unit B plus repeat unit A, which is itself a fused bi-cyclic structure. The present composition contains only one cyclic structure.

[14] Consequently, the JP '343 structure, which contains two repeat units, necessarily excludes the present composition, which contains only one cyclic structure. Importantly, even the repeat unit A in JP '343 as a fused bi-cyclic structure necessarily excludes the recited composition. Accordingly, the recited structure differs from that that of the JP '343 disclosed compositions.

[15] Moreover, the recited invention would not be a predictable result and therefore obvious. This is because repeat unit A of the JP '343 polymer e does not lead as an individual structure to the present composition. Nor does repeat unit B of the JP '343 polymer lead as an individual structure to the present composition. Nor does the JP'343 co-polymer as an integral structure lead to the present composition. One of skill in the art would not take the structure of the JP'343 composition or any of its repeat units and arrive at the present composition for the stated purpose.

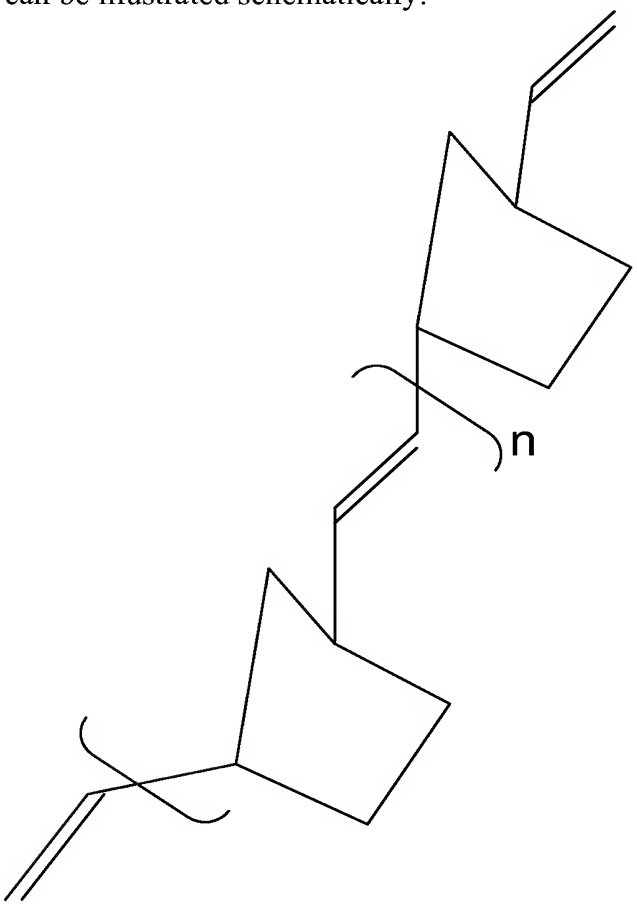
[16] Applicants respectfully request the withdrawal of these rejections.

Kodemura et al.

[17] In ¶6 of the Office Action, the Examiner rejected claims 1, 5, 10, 14-15, 20-22 and 24 under this provision as anticipated by or in the alternative as obviated by U.S. Pat. No. 6,492,443 to Kodemura et al ["Kodemura"].

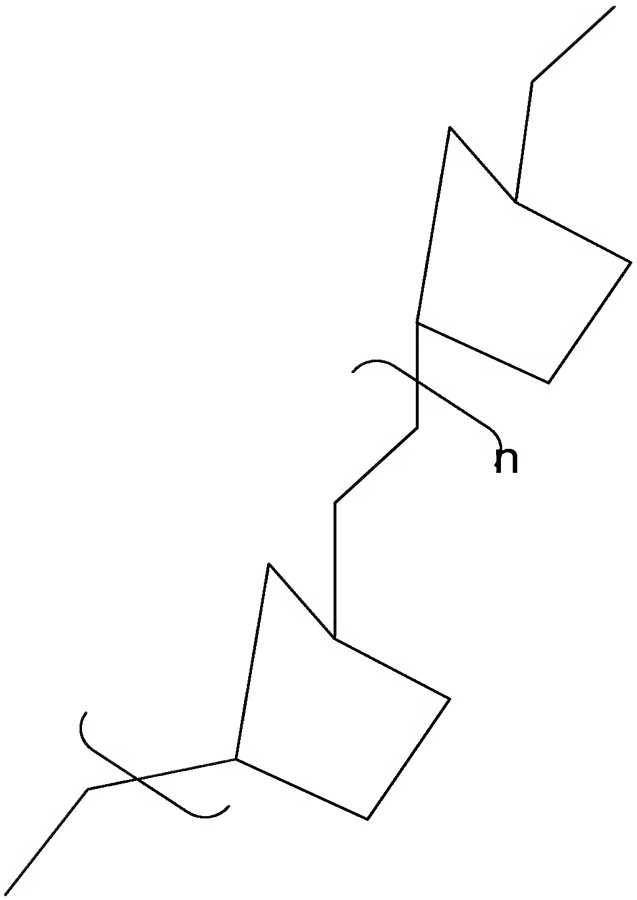
[18] As stated above, an addition polymerization mechanism of the norbornene double bond produces the recited polynorbornenes. The polymerization takes place in a single step. No post-hydrogenation is required to yield a fully saturated hydrocarbon backbone. By contrast, Kodemura, col. 6: 25 states that the polyolefin forming process is a two step process consisting of a polymerization step and a hydrogenation step. Kodemura, col. 6: 31 further defines the polymerization process as a ring-opening polymerization.

[19] Beginning with the same norbornene monomer shown above, the Kodemura process can be illustrated schematically:



[20] The compound produced by the ring opening polymerization process described in Kodemura has the structure illustrated above. This polymer has an unsaturated backbone, that is, there are double bonds in the backbone. These bonds are unstable and prone to thermo-oxidative degradation. Even so, the Kodemura compound may be stable enough to be used in some electronic applications.

[21] However, the Kodemura compound also has a low Tg. Therefore, the general unstability of the Kodemura compound coupled with its low Tg makes it unusable in resistor and planar capacitor applications, which are the recited and disclosed contexts for the present compositions. Therefore, a hydrogenation step is undertaken to yield the fully saturated backbone shown below:



Polynorbornene structure described in Kodemura after the hydrogenation step.

[22] Even though the polymer produced by the polymerization process disclosed in Kodemura is also generally termed "polynorbornene", the repeat unit of the Kodemura polymer is fundamentally, that is, structurally, different from the repeat unit of the present composition. A comparison of the structure of the present composition (above) with that of the Kodemura polynorbornene shows that the two structures are different compositions of matter. Moreover, because of the specific instability of the Kodemura compositions in the recited contexts of resistors and planar capacitors, those of ordinary skill in the art would not rely on the Kodemura structure nor would they combine common sense, scientific inference or ordinary creativity to arrive at the present composition. Thus, relying on standards enunciated in *KSR,* the Applicant respectfully asserts that the Kodemura composition as a starting point could not lead a skilled artisan to the recited compositions as a predictable result.

Rejections under 35 U.S.C. 103(a)

Kodemura

[23] In ¶7 of the Office Action, the Examiner rejected claims 16, 19 and 33 under this provision as obvious over Kodemura. As discussed above, the Kodemura polymer, having an unsaturated polymer backbone, is unsuitable in electronic applications because of its instability.

[24] In ¶8 of the Office Action, the Examiner rejected claims 16-19, 25, 27, 29, 31 and 33 under this provision as obvious over Kodemura in view of U.S. Pat. No. 5470643 to Dorfman ["Dorfman"]. These claims recite the composition used in a resistor/capacitor context. The basis for this rejection is the assumption that the composition disclosed in Kodemura is the same as that recited in the claims and is therefore expected to have the same properties, that is, to be beneficial in electronic devices.

[25] For the reasons stated herein in ¶¶20-21, 23, this assumption is not supported. First, the Kodemura composition is not the same structure recited in the claims and second, the Kodemura composition does not share the same properties as the present composition. Further, the Dorfman disclosure does not rehabilitate the deficiencies in the Kodemura reference. Dorfman is used primarily to disclose compositions in electronic devices. As this combination does not set forth a prima facie case of obviousness, Applicants respectfully request the withdrawal of this application.

[26] In ¶9 of the Office Action, the Examiner rejected claims 16-18, 25, 27, 29, 31 and 33 under this provision as obvious over JP '343 in view of Dorfman. For the reasons stated above in ¶¶ 13-15, JP '343 does not disclose the same composition as recited in the claims and does not suggest the present composition to a skilled artisan. As in the above rejection, neither does the Dorfman disclosure rehabilitate the deficiencies in the Kodemura reference. Dorfman is used primarily to disclose compositions in electronic devices. The issue of crosslinking has no relevance whether this combination supports an obviousness rejection. As this combination does not set forth a prima facie case of obviousness, Applicants respectfully request the withdrawal of this application.

[27] In ¶10 of the Office Action, the Examiner rejected claim 11 under this provision as obvious over JP '343 in view of Japanese Pat. Pub. No. JP 04214778 (English abstract only). Inasmuch as JP'343 does not disclose the same composition and the English abstract of JP 04214778 discloses a copolymer comprising a curable polyhydroxstyrene derivative used in circuit board wiring, merely combining these references does not without more identify a reason why a skilled artisan would have been prompted to combine these references.

Examining Guidelines for Determining Obviousness, published 19 Oct 07 ["KSR Guidelines"], pg. 57529.

[28] In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

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